Ted Stevens Anchorage International Airport

Terminal Area Concept Study

December 2005

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Purpose and Process

Objectives -

- Preserve an Envelope for Future Terminal Development
- Reduce / Eliminate Known Conflicting Interests in the Terminal Area
- Provide a Basis for the Master Plan

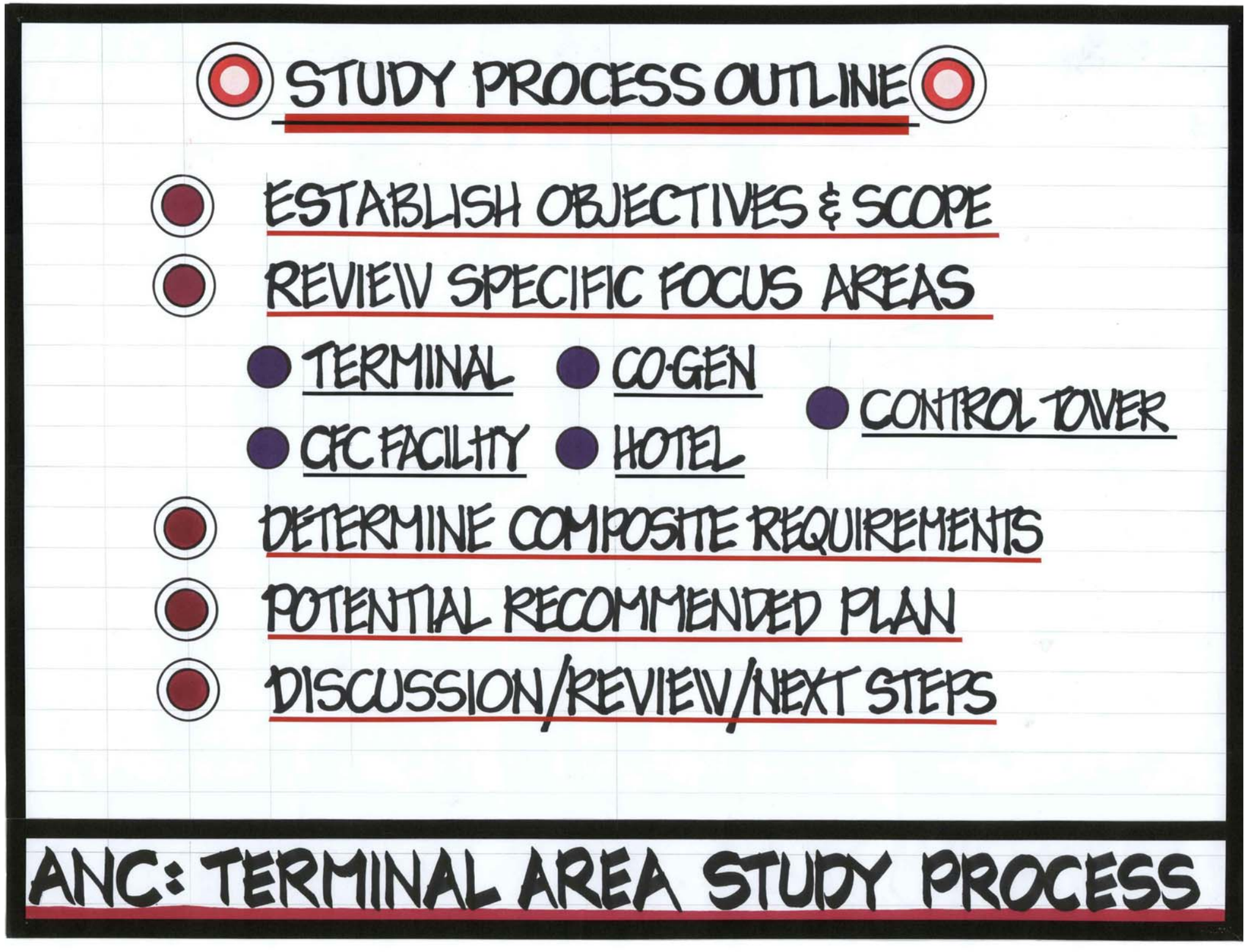
Process -

- Review existing master plan, reports, space programs, site plans, and terminal floor plans.
- Identify terminal growth rates and future terminal expansion options.
- Identify existing and proposed terminal support facilities.
- Identify site location alternatives for terminal support facilities.
- Recommend locations for terminal support facilities that maximize future terminal growth options.
- Provide recommended terminal area master plan showing terminal, gates, and terminal support facilities.
- Make recommendations for construction phasing.

ANC Staff - Participation

- ANC Staff meeting review of process and provide input - September 12, 2005
- ANC Staff meeting to review proposed terminal support facilities and verify program – September 14, 2005
- Final meeting with ANC Staff to review findings and recommended Terminal Area Concept Study – September 16, 2005
- Note: Review of past reports, terminal expansion options, and the identification of terminal support facility requirements occurred prior to the first meeting on September 12, 2005.

A separate "Terminal Area Study Process" was presented in the final ANC meeting on September 16, 2005 – Reference Page 2 Following.


STUDY PROCESS OUTLINE
ESTABLISH OBJECTIVES & SCOPE
REVIEW SPECIFIC FOCUS AREAS
TERMINAL
CO-GEN
CONTROL TOWER
CFC FACILITY
HOTEL
DETERMINE COMPOSITE REQUIREMENTS
POTENTIAL RECOMMENDED PLAN
DISCUSSION/REVIEW/NEXT STEPS
ANC: TERMINAL AREA STUDY PROCESS

Executive Summary

The Terminal Area Concept Study was conducted to identify the most likely terminal area growth pattern and sequence of growth at Ted Stevens Anchorage International Airport (ANC). This study provides information on future development that allows for the evaluation of location options for various terminal support facilities such as, facility maintenance, co-generation, airport hotel, and structural parking. It is important to plan support facilities so the area required for terminal growth is preserved for the future. This is important to the forthcoming airport-wide Master Plan Update. It should be reviewed and revisited as the Master Plan is developed.

A new project is underway to renovate older portions of the South Terminal. This study may also influence near term decisions on renovations and additions to the existing terminal complex that should support long range terminal area development.

This study shows the expansion of domestic terminal gate capacity in three major areas. The first gate expansion will most likely occur in the construction of a mid-field Concourse "D" located mid-way between existing Concourse B and the North Terminal. This expansion was anticipated in the Concourse C planning and design. Expansion of the existing ticket and baggage claim lobbies will utilize a portion of the two-level curbside road that is now unoccupied, but was designed to accommodate this future expansion. The new mid-field concourse and lobby expansion will result in an increase of six jet gates for a total of 15 jet gates on Concourses C & D. This study uses the 757-300 with winglets (wingspan of about 135 feet) as the design aircraft.

A second area of expansion is to the southeast. This expansion will expand the existing ticket and baggage claim lobbies, two-level curbside road, and will result in a total potential increase of seventeen jet gates. This expansion will occupy an area west of South Aircraft Drive and south of the new elevated Alaska Railroad line. Although this expansion may be years in the future ANC Leasing should begin to preserve this area for future terminal expansion. A new services, security, and retail core may be needed for the efficient flow of domestic passengers to the expanded terminal areas.

A third area of potential domestic gate expansion is the dedication of all or a portion of the North Terminal for domestic use. If international passenger traffic declines or if the international jet gates are relocated to a different area, then the partial or total use of the North Terminal for domestic operations is a viable option. Six domestic jet gates can occupy the apron area of the four landside international gates. This will require substantial interior changes and a possible relocation of the FIS operation. A replacement of the building may be cost effective if an all domestic jet gates scheme is determined to be viable. This change will provide for fourteen domestic jet gates.

The construction of all the above options will result in a total of 55 domestic jet gates. This total will vary if additional area is needed for regional airline growth or if all, or a portion of, the international gates remain in service. Refer to page 15 for a breakdown of the numbers and types of gates for each expansion option.

This study also identifies potential site locations for a new centralized facilities maintenance complex, co-generation facility, and an airport hotel. Recommendations are included for each support facility in the "Future Development" site plan on page 14.

Numerous prior studies and the existing airport master plan have been reviewed and included in this report by references noted on page 4. Where appropriate excepts are used to support the conclusions and recommendations made in this study.

The Following Prior Studies were Reviewed and Considered in Developing The Terminal Area Concept Study

Prior Studies – Terminal Expansion

Ted Stevens Anchorage International Airport, Master Plan Update, Technical Report, Prepared by HNTB Corporation – dated November 2002

This report is an airport wide master plan, but does not focus on the terminal area. This Terminal Area Master Plan does not attempt to update this report, but does use it as a baseline for the airport overall. This Terminal Area Master Plan provides for terminal growth options that go beyond the HNTB report.

Sketch Planning Process, Technical Report, Terminal Expansion Program, Anchorage International Airport, Prepared by McCool Carlson Green Team – dated January 2, 1998

This report produced seventeen different terminal master plan alternatives. These alternatives were the result of months of workshops with the airlines and airport staff.

A recommended terminal master plan replaced Concourse C and renovated the balance of the South Terminal. Future domestic jet capacity was provided by a "mid-field" concourse located parallel to and mid-way between Concourse B and the North Terminal.

A composite footprint of the above seventeen terminal master plan alternatives is presented on the following page. This composite is used to establish the terminal development envelope.

Prior Studies – Terminal Support

Ted Stevens Anchorage International Airport, Support Space Needs Assessment, Prepared by USKH – dated July 2003

This study focuses on the needs of the Airport Facilities Section that is responsible for the building maintenance and custodial services at the airport. This report recommends the construction of a Centralized Facilities Complex to consolidate this function into a location to minimize staff travel distance and maximize staff efficiency. A current remote location results in significant travel time.

Ted Stevens Anchorage International Airport, Evaluation of Cogeneration Alternatives, Prepared by Landrum & Brown – dated October 26, 2000

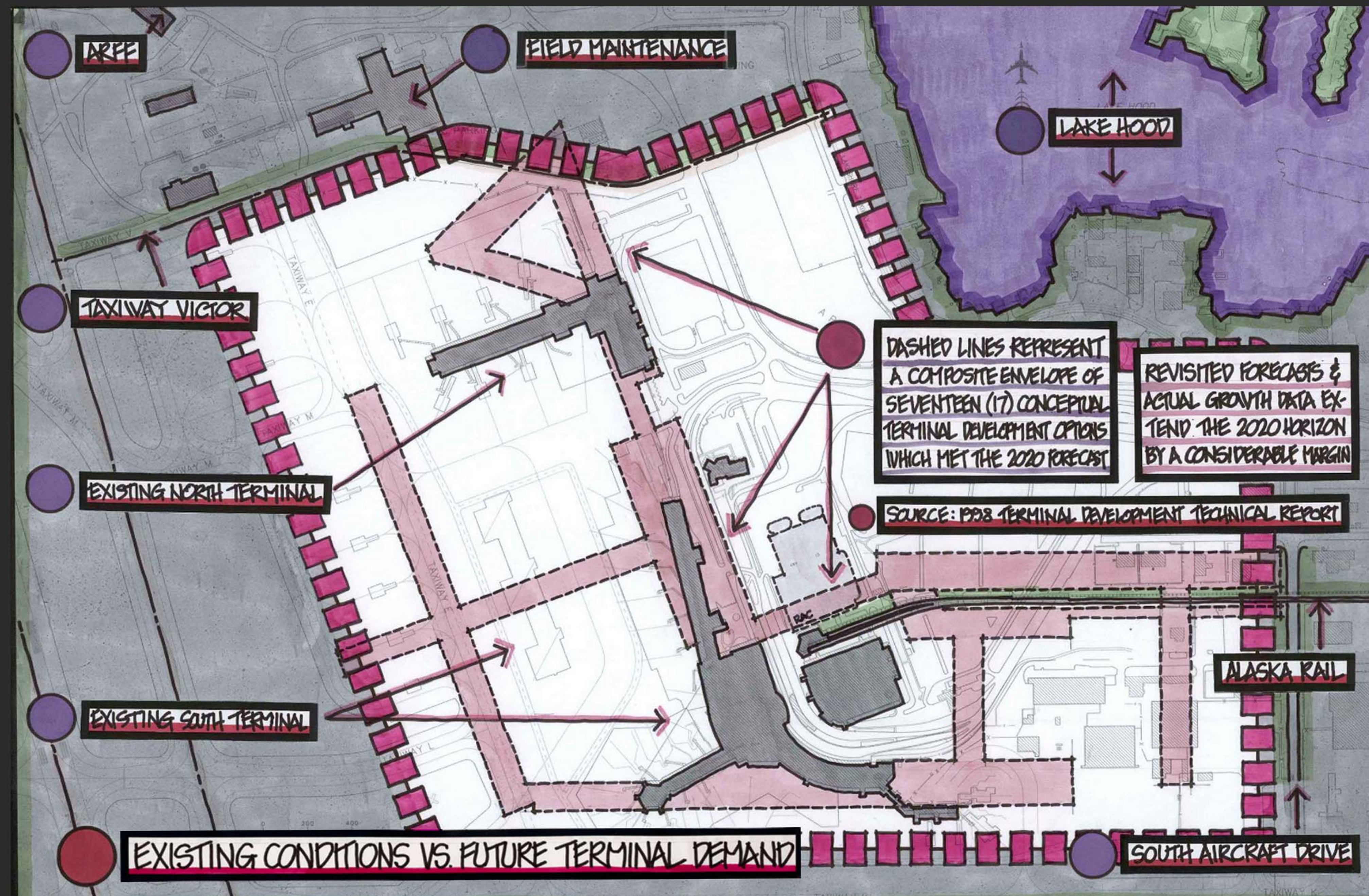
Anchorage International Airport Cogeneration Feasibility Study, Prepared by ETSI Consulting, Inc. – dated February 1999

Anchorage International Airport, Cogeneration Feasibility Study, Prepared by AMC Engineers – dated July 9,1998

The above studies all deal with the feasibility, design, and location of a cogeneration facility to provide electrical generation and the resulting waste heat to power and heat the terminal complex at Ted Stevens Anchorage International Airport. The primary issues associated with location are distance from plant to terminal and impact on visibility from the FAA Tower for viewing airside operations.

TERMINAL ENVELOPE

- THIS EXHIBIT IDENTIFIES/REPRESENTS A "FOOTPRINT" OF ALL (17) TERMINAL DEVELOPMENT OPTIONS PREVIOUSLY STUDIED (1998 REPORT)
- IT ESTABLISHES A BROADLY DELINEATED DEVELOPMENT "ENVELOPE WHICH PRESERVES THE FLEXIBILITY FOR FUTURE TERMINAL EXPANSION IN SEVERAL DIFFERENT WAYS DEPENDING UPON SPECIFIC NEEDS
- FIRST STEP IN PLANNING PROCESS



ANC: TERMINAL AREA STUDIES

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Terminal Area Projects In Progress

ANC South Terminal Seismic and Security Retrofit

Following the completion of Concourse C replacement, this project will correct existing seismic and security deficiencies in the other areas of the South Terminal. This project reconfigures jet gates to optimize apron and gate utilization and relocates Delta Airlines to the South Terminal.

RAC (Rental Car) Parking Garage and Quick Turn Facility

This project is being funded, designed, and constructed as a private sector development. It will provide for covered rental car parking and a “quick-turn” facility for cleaning and refueling of rental cars. Tunnel access will be extended from the existing railroad terminal access tunnel. This facility will result in a significantly higher level of service to the traveling public renting cars at the airport.

Ted Stevens Anchorage International Airport

Existing Terminal Area

ARRF

Field Maintenance

Victor Taxiway

North Terminal

(International & landside domestic cross-use)

Cargo Refueling

Concourse C

FAA

RON & Cargo

Future RAC Garage

Alaska Railroad

Parking Garage

Terminal Core

Concourse B

Concourse A

Regional Parking

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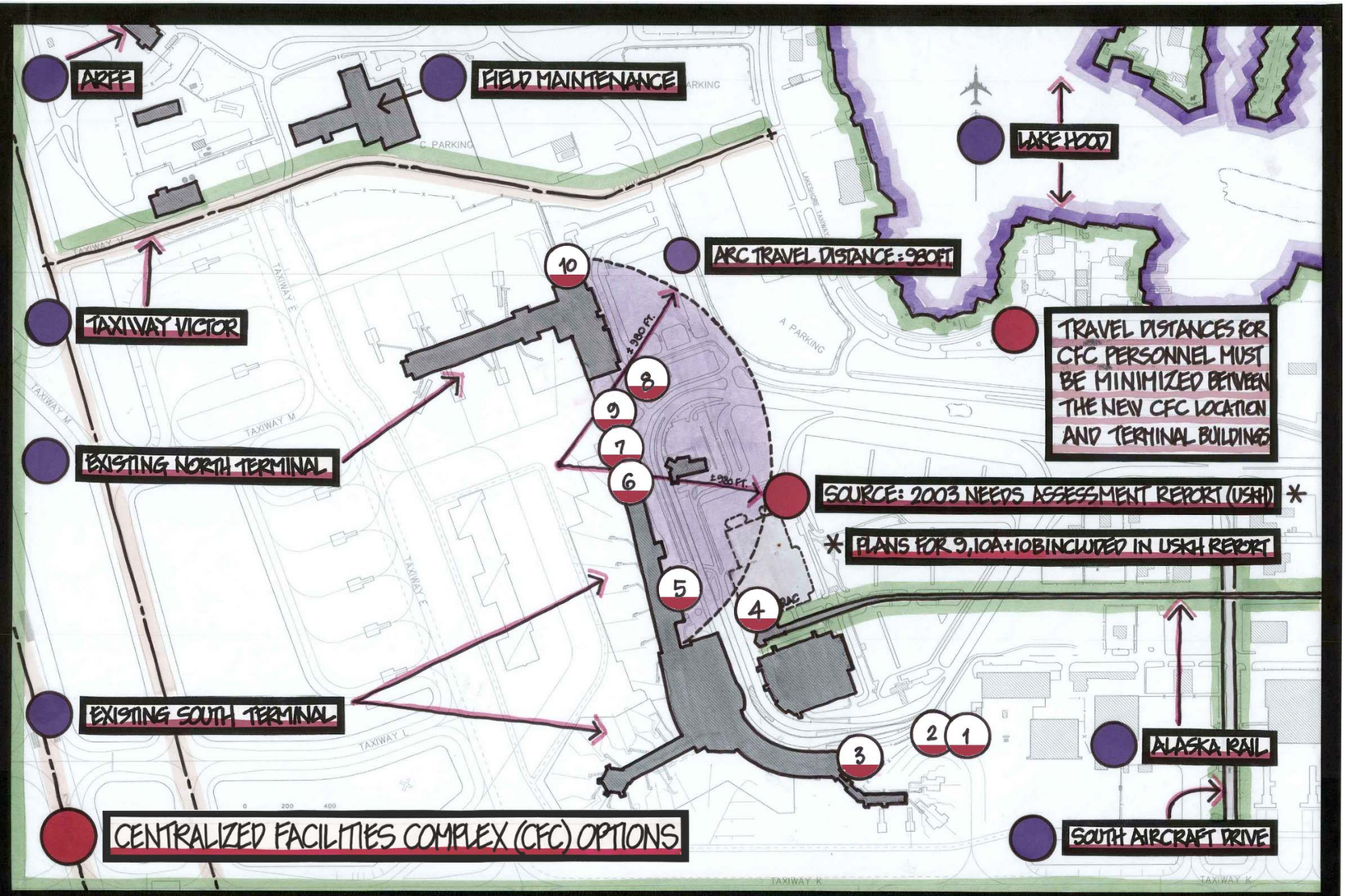
CFC LOCATION OPTIONS

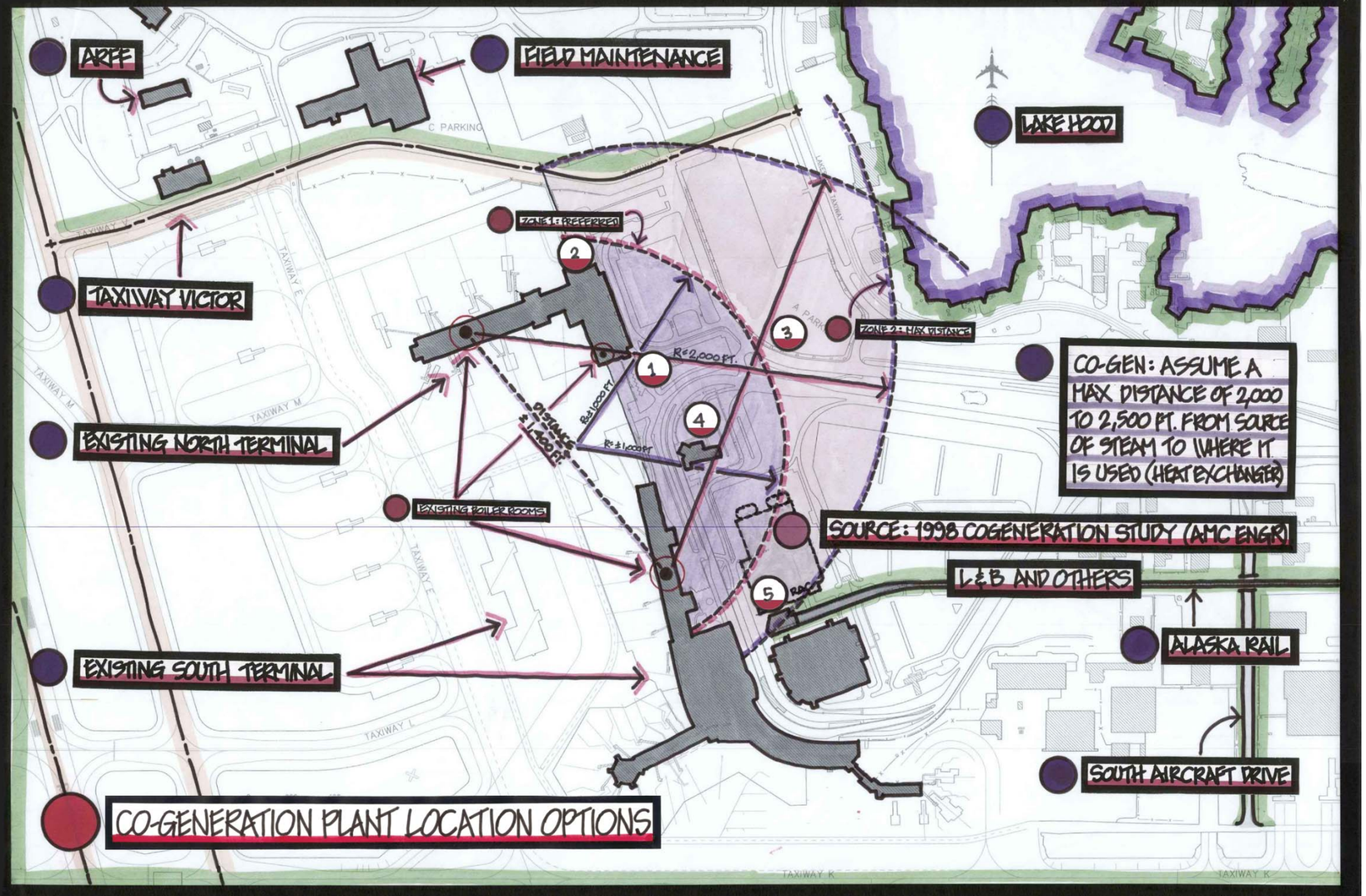
- LOCATION IS DRIVEN BY TRAVEL TIME/DISTANCE AND MANPOWER
- SITES 1, 2, AND 3 ARE NEEDED FOR FUTURE TERMINAL EXPANSION
- SITE 4 OCCUPIED BY RAC
- SITE 5 POTENTIALLY IMPACTS TERMINAL EXPANSION AND SERVICE ACCESS
- SITES 6 AND 7 IMPACT FUTURE AIRCRAFT PARKING
- SITE 8 MAY IMPACT FUTURE LOBBY
- SITE 10 HAS GOOD LANDSIDE ACCESS BUT LONGER TRAVEL DISTANCE



ANC: TERMINAL AREA STUDIES

CO-GENERATION OPTIONS

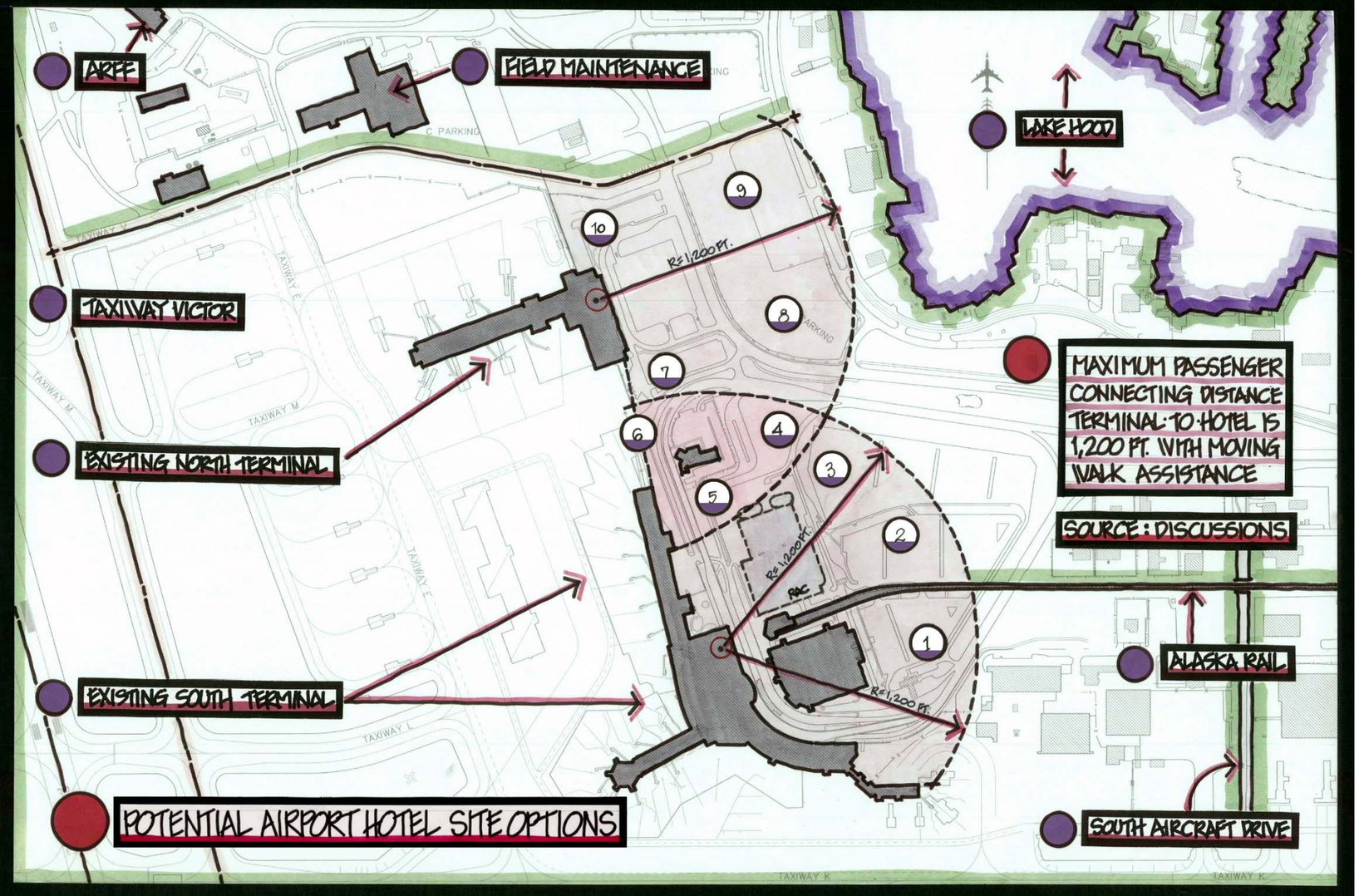
- DISTRIBUTION DISTANCE CRITERIA: 2,000 FT. MAX (SOURCE OF STEAM TO HEAT EXCHANGER)
- PLUME FROM PLANT MAY IMPACT CONTROL TOWER VISIBILITY UNDER CERTAIN CONDITIONS
- SITE OPTION COMMENTS:
  1. POTENTIAL HOTEL CONFLICT
  2. IMPACTS FUTURE TERMINAL EXPANSION/DEVELOPMENT
  3. POTENTIALLY MOST SUITABLE
  4. MAY REQUIRE C/T RELOCATION
  5. RAC NOW OCCUPIES THIS SITE



ANC: TERMINAL AREA STUDIES

HOTEL SITE OPTIONS

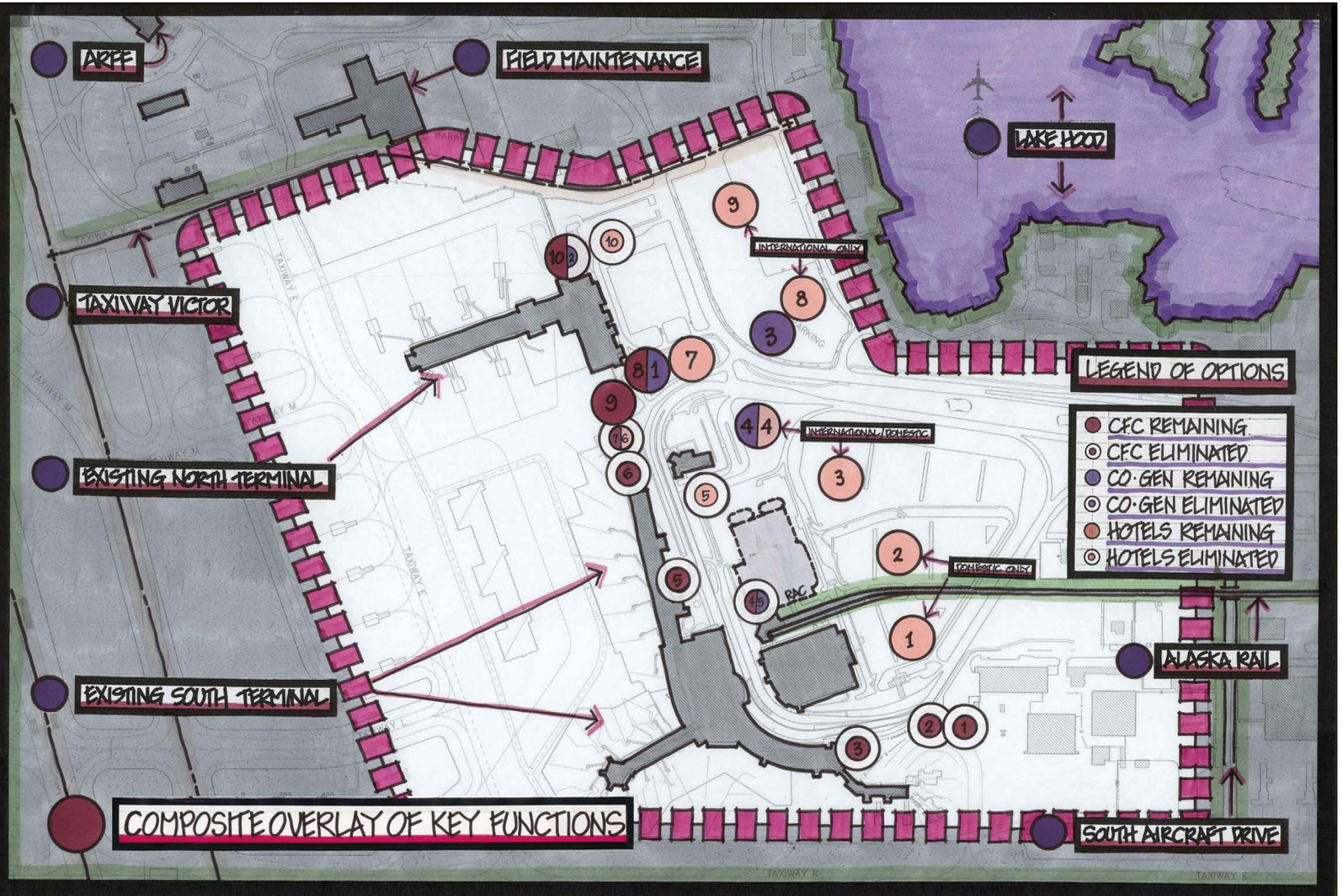
- A CLEAR DEFINITION OF THE HOTEL PATRON IS NEEDED
  - (A) DOMESTIC/INTERNATIONAL
  - (B) BUSINESS/PLEASURE/CONVENTION
  - (C) TRANSIT (SHORT LAYOVER)
- PEDESTRIAN ACCESS IS IMPORTANT (HOWEVER CLOSE-IN TERMINAL SITES ARE MORE RESTRICTIVE
- SITE (5) DEPENDENT ON CONTROL TOWER RELOCATION
- SITES (3)(4) CENTRAL TO TERMINAL BUT MAY HAVE VIEW ISSUES
- SITES (8)(9)(10) REMOTE/DOMESTIC



ANC: TERMINAL AREA STUDIES

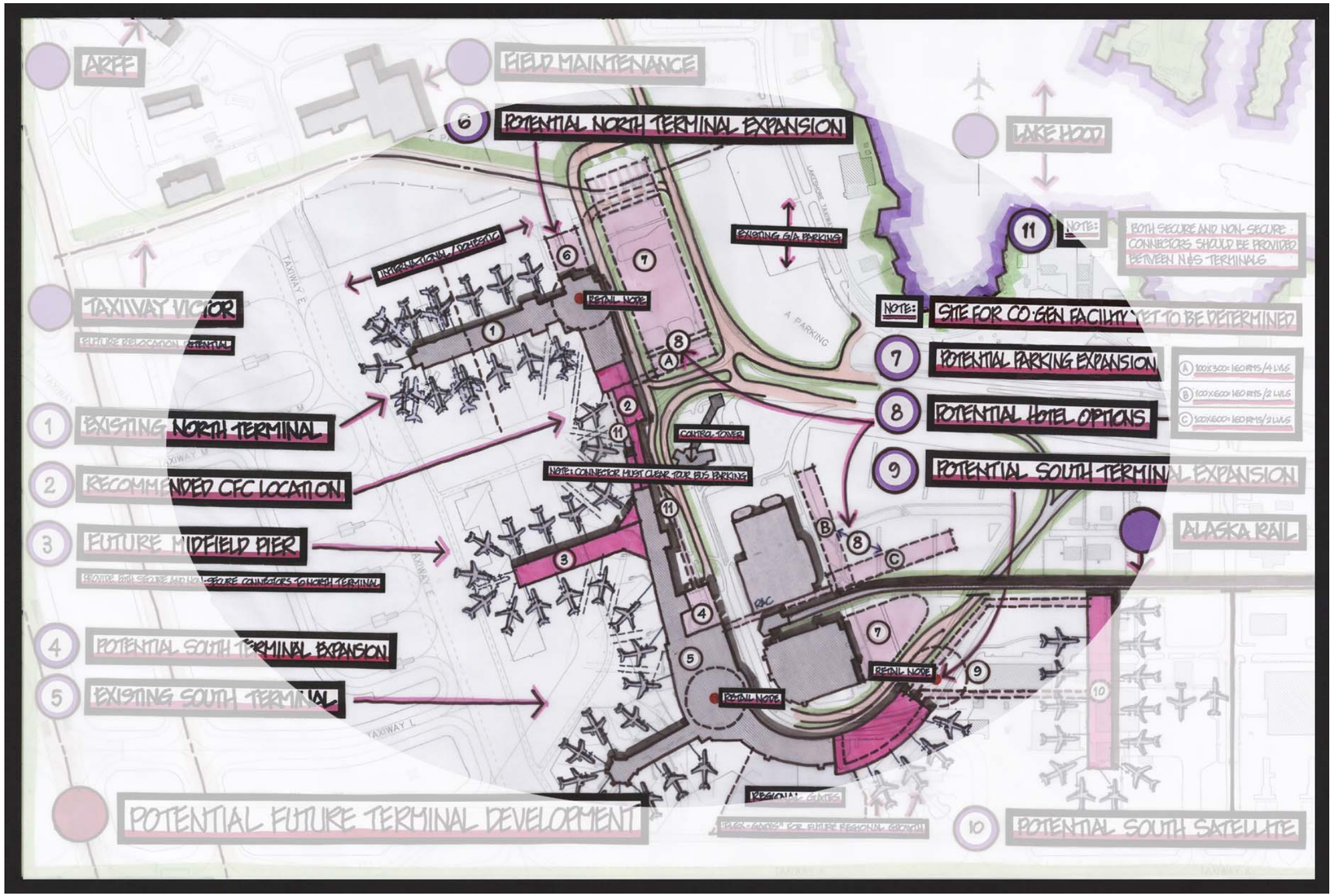
COMPOSITE OVERLAY

- PREFERRED (NON-CONFLICTING) SITES ARE REPRESENTED BY SOLID-COLOR DOTS (SEE LEGEND)
- CERTAIN SITES ARE SUITABLE FOR MULTIPLE (2-3) FUNCTIONS
- AN AREA FOR NORTH TERMINAL EXPANSION (SOUTH) SHOULD BE PRESERVED
- POSITIONED CAREFULLY, TERMINAL SUPPORT (CFC FACILITY) MAY CO-EXIST WITH AIRCRAFT PARKING POSITIONS
- OTHER COMPATIBILITIES EXIST



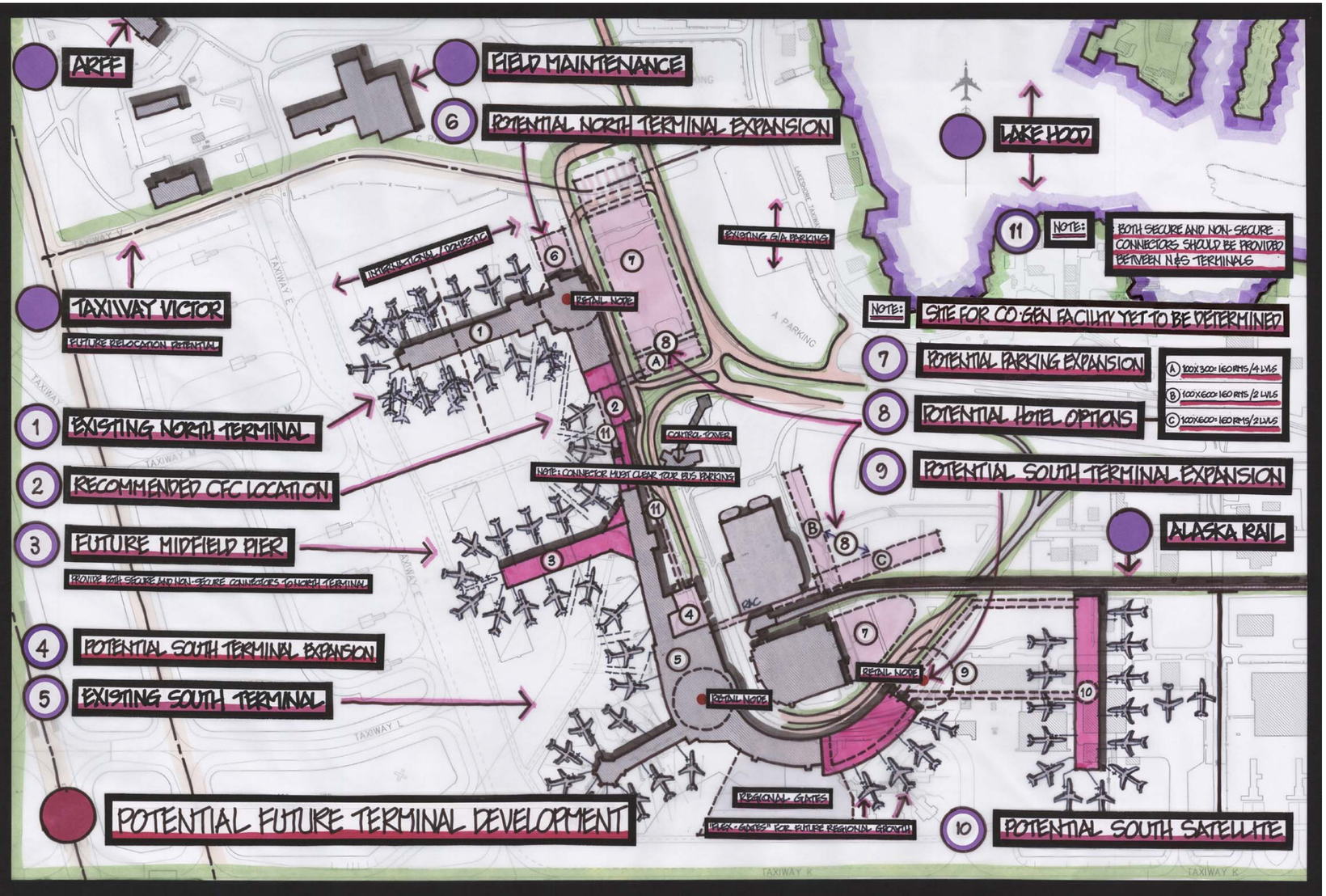
ANC: TERMINAL AREA STUDIES

Future Terminal Development



FUTURE DEVELOPMENT

- IDENTIFIES OPTIONS FOR FUTURE TERMINAL DEVELOPMENT
- OPTIONS MAY BE LINKED TO FUTURE GROWTH PERCENTAGES AS "TRIGGER POINTS"
- FLEXIBILITY PRESERVED FOR DOMESTIC, INTERNATIONAL, AND REGIONAL GATE UTILIZATION
- MID-FIELD PIER MAY BE MOST LIKELY NEXT EXPANSION AFTER A/B REMODEL
- REFLECTS OPTIONS FOR TERMINAL SUPPORT FACILITIES DEVELOPMENT



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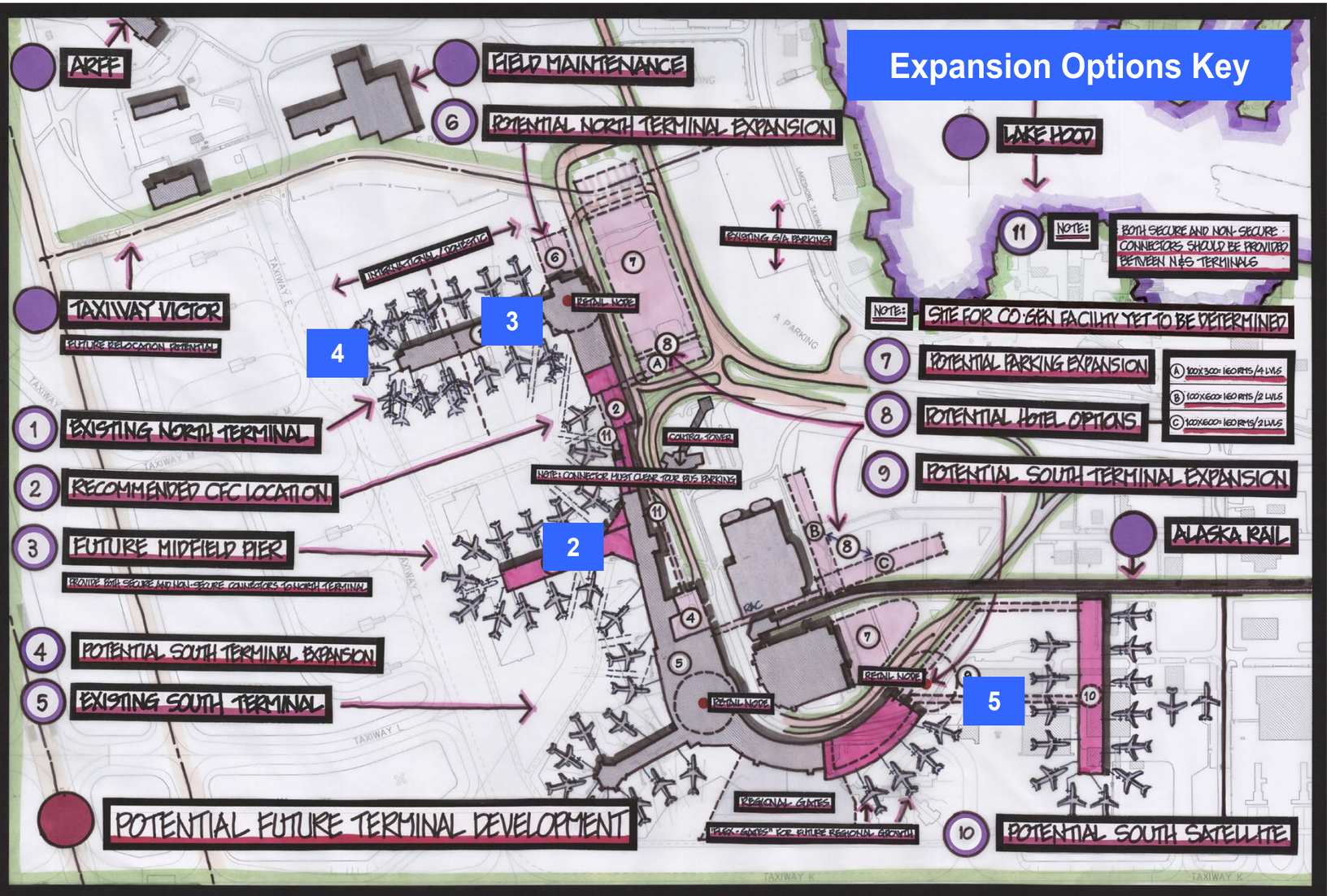


NOTE: Expansion Options (blue squares with numbers) are described on pages 15 and 16.

Gate Capacity Chart

Option		South Terminal Concourse A	South Terminal Concourse B	South Terminal Concourse C/D
1	**Existing Conditions** Following A&B Upgrade	4 - Domestic (mixed) 20 - Regional Parking	9 - Domestic (mixed)	9 - Domestic (737-900)
2	**Existing Plus Mid-Field Pier**	4 - Domestic (mixed) 20 - Regional Parking	9 - Domestic (mixed)	15 - Domestic (757-300)
3	**Existing Plus North Terminal - Ph 1** Landside Gates Cross use with International Gates	4 - Domestic (mixed) 20 - Regional Parking	9 - Domestic (mixed)	9 - Domestic (737-900)
4	**Existing Plus North Terminal - Ph 2** Convert to all Domestic Gates Relocate International Terminal	4 - Domestic (mixed) 20 - Regional Parking	9 - Domestic (mixed)	9 - Domestic (737-900)
5	**Existing Plus A Expansion & Satellite**	17 - Domestic (757-300) 20 - Regional Parking	9 - Domestic (mixed)	9 - Domestic (737-900)
6	**All Options** Relocate International Terminal	17 - Domestic (757-300) 20 - Regional Parking	9 - Domestic (mixed)	15 - Domestic (757-300)

Note: Regional airline growth can be accommodated by displacing or cross utilizing jet gates on A Concourse.

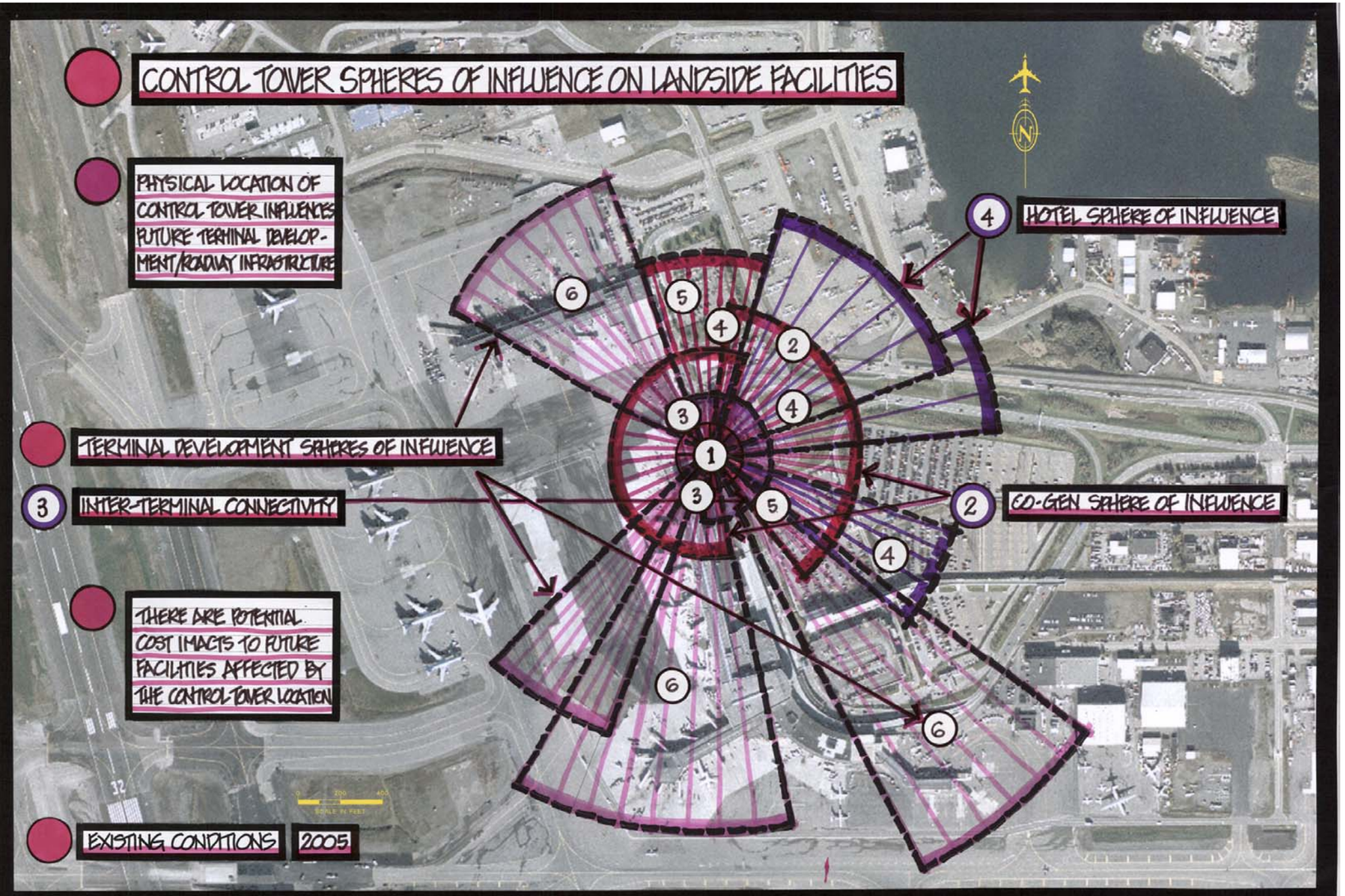
5A	**Existing Plus A Expansion & Pier**	15 - Domestic (757-300) 28 - Regional Parking	9 - Domestic (mixed)	9 - Domestic (737-900)

Option Features

Option			
1	**Existing Conditions** Following A&B Upgrade		
2	**Mid-Field Pier**	Terminal	Expand existing ticketing and baggage claim
		Terminal	Served by existing core (security, services, retail)
		Airside	New apron / airside
		Airside	Displaces gates on C Concourse
		Airside	Displaces 3 cargo refueling hardstands
		Landside	Existing two level curbside road / no new road construction
3	**North Terminal - Ph 1**	Terminal	Relocate FIS and remodel gate areas
	Landside Gates (4 Int'l = 6 Domestic)	Terminal	Additional ticketing / baggage claim may be required
	Cross use with International Gates	Terminal	Code upgrade likely
		Airside	Add bridges and hardstands at landside Int'l gates
		Landside	Single level curside likely
4	**North Terminal - Ph 2**	Terminal	Replace or renovate NT to domestic use
		Terminal	New core may be required (security, services, retail)
	All Domestic Gates	Airside	Modify airside - fuel, bridges, apron
		Landside	Single level curside likely
		Landside	Landside baggage claim lobby
5	**A Expansion & Pier**	Terminal	Expand ticketing and baggage claim southeast
		Terminal	New core may be required (security, services, retail)
		Airside	New satellite west of South Aircraft Drive
		Landside	Expand two level curbside road east

CONTROL TOWER ISSUES

- EXISTING CONTROL TOWER LOCATION RESULTS IN MULTIPLE IMPACTS TO FUTURE TERMINAL AREA DEVELOPMENT AND COSTS
  1. ROADWAY GEOMETRY INFRASTRUCTURE
  2. CO-GEN FACILITY LOCATION (PLUME)
  3. INTER-TERMINAL CONNECTIVITY
  4. FUTURE HOTEL LOCATIONS (VISIBILITY OF LAKE HOOD)
  5. CROSS-UTILIZATION OF FACILITIES AND RESOURCES (PARKING)
  6. LONG-RANGE TERMINAL DEVELOPMENT PLANS (VISIBILITY ISSUES)



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